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| Help | Logout | Interrupt |

| Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences | Cases |

Search Results -

Terms	Documents
L31 and l1	1

Database:

- US Patents Full-Text Database
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Search: L32

[Refine Search]

[Recall Text]   [Clear]

Search History

DATE: Monday, September 29, 2003   Printable Copy   Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L32	L31 and l1	1	L32
L31	L30 and l10 and l14	1	L31
L30	6125323.pn.	2	L30
L29	l8 and L28	1	L29
L28	preference or setting	1249970	L28
L27	link and l8	0	L27
L26	segment and l8	0	L26
L25	l8 and L24	1	L25
L24	congestion	23617	L24
L23	l8 and L22	0	L23
L22	alternate	510529	L22
L21	L20 and l8	1	L21
L20	time	5542825	L20
L19	L18 and l2	2	L19
L18	L17 and l14	15	L18
L17	L1 and l10	26	L17
L16	L1 an dl10	22212	L16
L15	L14 and l5	2	L15
L14	telephone	498581	L14
L13	l5 and l10	3	L13
L12	l5 and l8	1	L12
L11	l8 and L10	0	L11
L10	cell$	1479448	L10
L9	l6 and L8	1	L9
L8	6615134.pn.	2	L8
L7	l5 and L6	3	L7
L6	travel$	792362	L6
L5	l3 and L4	5	L5
L4	traffic	142494	L4
L3	l1 and L2	6	L3
L2	mobile adj (unit or terminal)	30484	L2
L1	learn$ adj (route or road)	144	L1

END OF SEARCH HISTORY

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End of Result Set

☐ [Generate Collection] [Print]

DOCUMENT-IDENTIFIER: US 6125323 A
TITLE: Device for processing road data or intersection data

US Patent No. (1):
6125323

Brief Summary Text (3):
The present invention relates to a device for processing road data or intersection data and, more specifically, to a navigation device in which a route along which a moving body will travel is identified based upon map data, and the route that is identified is displayed to the operator. In particular, the invention relates to a navigation system which learns the route of travel.
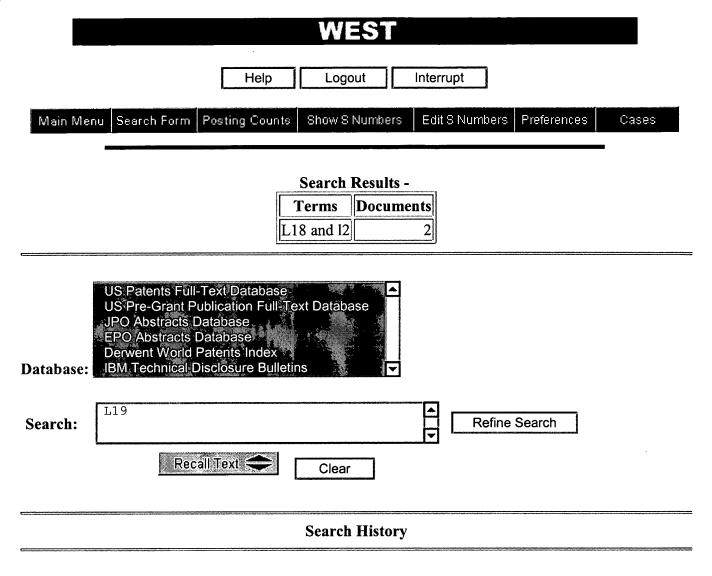
Detailed Description Text (18):
Similarly, the beacon receiver unit 26 receives beacon signals from a data providing system such as VICS (Vehicle Information and Communication System) or the like, and the received data and the corrected data of GPS are output to the I/O data bus 28. The data transmitter/receiver unit 27 exchanges a variety of information related to the present position or the road conditions near the car relative to the bi-directional present position information offering system or the ATIS (advanced traffic information service), etc., by utilizing a cellular phone, FM multiplex signals or a telephone circuit. These items of information are used as detecting information for the car position or support information of movement. The beacon receiver unit 26 and the data transmitter/receiver unit 27 may be omitted.

Detailed Description Text (35):
A destination data file F6 stores data related to the positions and names of various facilities that may be destinations. The facilities may be sightseeing spots, buildings, sites, companies and offices listed in a telephone book. A guide point data file F7 stores guide data of points that require guidance. The points may be the contents of information boards and branch points. A detailed destination data file F8 stores detailed data related to destinations stored in the destination data file F6. A road name data file F9 stores name data of principal roads among the roads stored in the road data file F4. A branch point name data file F10 stores name data of principal branch points. An address data file F11 stores list data for identifying, from the addresses, the destinations stored in the destination data file F6.

Detailed Description Text (36):
A file F12 contains list data of toll numbers and local office numbers for only the destinations stored in the destination data file F6. A registered telephone number file F13 stores telephone number data of clients input by the user. A landmark data file F14 stores data related to positions and names of points that serve as landmarks while driving and of the places that should be remembered input by the user. The point data file F15 stores detailed data of landmark points stored in the landmark data file F14. A facility data file F16 stores data related to positions and descriptions of destinations such as gas stations, drug stores, parking lots and positions of objective places where the driver may wish to drop in, in addition to the destinations.

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| Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences | Cases |

Search Results -

Terms	Documents
L18 and l2	2

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> JPO Abstracts Database
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Search:

> L19

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L18	L17 and l14	15	L18
L17	L1 and l10	26	L17
L16	L1 an dl10	22212	L16
L15	L14 and l5	2	L15
L14	telephone	498581	L14
L13	l5 and l10	3	L13
L12	l5 and l8	1	L12
L11	l8 and L10	0	L11
L10	cell$	1479448	L10
L9	l6 and L8	1	L9
L8	6615134.pn.	2	L8
L7	l5 and L6	3	L7
L6	travel$	792362	L6
L5	l3 and L4	5	L5
L4	traffic	142494	L4
L3	l1 and L2	6	L3
L2	mobile adj (unit or terminal)	30484	L2
L1	learn$ adj (route or road)	144	L1

END OF SEARCH HISTORY

WEST

DOCUMENT-IDENTIFIER: US 20020173907 A1
TITLE: Data communication system and method, and mobile body apparatus

Abstract Paragraph (1):
The present invention relates to a data communication system in which a first
request signal containing position information is transmitted from a first mobile
unit (6) to a base station (2), and in which the base station (2) searches for a,
second mobile unit (5) in accordance with the position information contained in the
first request signal, then transmits a second request signal to the second
mobile-unit (5), and returns data returned from the second mobile unit (5) to the,
first mobile unit (6).

Summary of Invention Paragraph (2):
[0001] This invention relates to a data communication system and method and a mobile
device which are suitable for a mobile communication system using a mobile terminal
as a communication terminal, and also relates to a program storage, medium in, which
a program used for these system and method is stored.

Summary of Invention Paragraph (4):
[0002] Conventionally, a moving route display device or a traveling route display
device has been practically used in which the positions of various mobile units such
as automobiles, ships, aircrafts and the like are traced and, displayed on a map
displayed on, for example, a color display screen of a cathode ray tube (CRT) or a
liquid crystal display on the basis of position information obtained by a position
measuring system such as the GPS (Global Positioning System). The GPS is a system
for detecting the present absolute position and traveling direction of an automobile
or the like, specifically, a GPS receiving terminal carried on an automobile or the
like, by using radio waves from 24 geostationary satellites (GPS satellites)
launched by the U.S. Department of Defense. Each GPS satellite is sending time
information, orbit information and the like. A GPS receiving terminal receives radio
waves from four satellites and calculates the distance from each of the satellites,
and thus can specify the position and time of the terminal itself from the
longitude, latitude and altitude. As a so-called car navigation system, which is a
system for displaying the traveling route of an automobile, there exists a
self-contained navigation system using a geomagnetic sensor, a car speed sensor, map
matching and the like, or a system using so-called beacon, signpost and the like and
also using a car speed sensor, map matching, a direction sensor and the like, as
well as the GPS.

Summary of Invention Paragraph (5):
[0003] Of the above-described conventional moving route display devices, in a car
navigation system which is becoming particularly popular recently, it is possible to
display not only a traveling route that is already taken by an automobile (mobile
unit) but also a route to be taken by, the automobile, for example, a route to a
certain destination, and also to guide the user on the route to the destination
using voices and images.

Summary of Invention Paragraph (6):
[0004] The conventional car navigation system does not use any means for learning
the, actual state of a position on the route to be taken by the automobile, that is,
the position of the automobile after the lapse of a predetermined time, for example,
means for obtaining an image and sound on the periphery of the position. Although

there exists a service for providing <u>traffic</u> congestion information on the route of the <u>mobile unit</u> linked with the conventional car navigation system, for example, so-called VICS (Vehicle Information and Communication System), the <u>traffic</u> congestion information is about a predetermined place and the state of other places than the predetermined place cannot be known. This applies not only to the car navigation system but also to other moving route display devices.

<u>Summary of Invention Paragraph</u> (7):
[0005] Meanwhile, in various mobile communication systems which enable data transmission/reception by <u>mobile terminals</u> having a communication function, if data indicating the state at a position where a <u>mobile terminal</u> A exists, for example, image data, is sent from the <u>mobile terminal</u> A to another <u>mobile terminal</u> B, the <u>mobile terminal</u> B can learn the state on the position where-the <u>mobile terminal</u> A exists, for example, an image thereof.

<u>Summary of Invention Paragraph</u> (8):
[0006] To realize this, the user of the <u>mobile terminal</u> A and the user of the <u>mobile terminal</u> B must know each other or must have determined in advance to send/receive data to/from each other. If the user of the <u>mobile terminal</u> B wants to know the actual state at a position on the route to be taken by the <u>mobile terminal</u> B, the <u>mobile terminal</u> A must have reached that position first. Moreover, if the user of the <u>mobile terminal</u> B wants to know the actual states of a plurality of different positions on the route to be taken by the <u>mobile terminal</u> B, a plurality of other <u>mobile terminals</u> must have been arranged at the respective positions. Such arrangements cannot be realized by any means, in consideration of the case where the route to be taken by the <u>mobile terminal</u> B might be changed.

<u>Summary of Invention Paragraph</u> (10):
[0007] In view of the foregoing status of the art, it is an object of the present invention to provide a data communication system and method and a mobile device which enable easy acquisition of the state of a desired position on a route to be taken by a certain <u>mobile terminal,</u> that is, provision of information acquired by a <u>mobile terminal</u> existing at a certain position to a <u>mobile terminal</u> at another position when necessary, and also to provide a program used for these system and method.

<u>Summary of Invention Paragraph</u> (11):
[0008] A data communication system according to the present invention comprises: a first <u>mobile unit</u> having first transmission/reception means for transmitting a first request signal containing position information to a base station and receiving data corresponding to the first request signal from the base station; a base station having search means for searching for a second <u>mobile unit</u> in, accordance with the position information contained in the first request signal, and second transmission/reception means for receiving the first request signal, transmitting a second request signal to the second <u>mobile unit</u> thus searched for, and returning data returned from the second <u>mobile unit</u> to the first <u>mobile unit</u>; and a second <u>mobile unit</u> having input means for inputting data, and third transmission/reception means for receiving the second request signal and returning the data inputted by the input means in accordance with the second request signal to the base station.

<u>Summary of Invention Paragraph</u> (12):
[0009] In this case, the base station has storage means for storing the data returned from the second <u>mobile unit,</u> and the storage means stores a plurality of route information on which the first <u>mobile unit</u> traveled in the past. The search means of the base station extracts route information which overlaps the position information contained in the first request signal, from the plurality of route information stored in the storage means, then predicts a traveling route of the first <u>mobile unit</u> on the basis of the extracted route information, and searches for the second <u>mobile unit</u> by using the predicted traveling route.

<u>Summary of Invention Paragraph</u> (13):
[0010] Another data communication system according to the present invention comprises: a first <u>mobile unit</u> having first transmission/reception means for transmitting a first request signal containing position information to a base station and, receiving data corresponding to the first request signal; a base

station having search means for searching for a second mobile unit in accordance
with the position information contained in the first request signal, and second
transmission/reception means for receiving the first request signal and transmitting
a second request signal containing information related to the first mobile unit to
the second, mobile unit thus searched for; and a second mobile unit having input
means for inputting data, and third transmission/reception means for receiving the
second request signal and returning the data inputted by the input means in
accordance with the second request signal to the first mobile unit.

Summary of Invention Paragraph (14):
[0011] Another data communication system according to the present invention
comprises: a first mobile unit having first transmission/reception means for
transmitting a first request signal containing position information to a base
station and receiving data corresponding to the first request signal from the base
station; a base station having search means for searching for a second mobile unit
in accordance with the position information contained in the first request signal,
second transmission/reception means for receiving the first request signal,
transmitting a second request signal to the second mobile unit thus searched for,
and returning data returned from the second mobile unit to the first mobile unit,
storage means for storing accounting information of users corresponding at least to
the first and second mobile, units, and control means for performing control to
update the accounting information of the users corresponding to the first and second
mobile units stored by the storage means; and a second mobile unit having input
means for inputting data, and third transmission/reception means for receiving the
second request signal and returning the data inputted by the input means in
accordance with the second request signal to the base station.

Summary of Invention Paragraph (17):
[0014] A server device used in a data communication system according to the present
invention comprises: communication means capable of communicating a signal to/from a
plurality of mobile units; holding means for holding information related to the
plurality of mobile units; search means for searching for a second mobile unit
corresponding to position information contained in a first request signal
transmitted from a first mobile unit by using the information related to the
plurality of mobile units held by the holding means; and generation means for
generating a second request signal to be transmitted to the second mobile unit thus
searched for; wherein the second request signal is transmitted to the second mobile
unit thus searched for and data returned from the second mobile unit is returned to
the first mobile unit.

Summary of Invention Paragraph (18):
[0015] Another server device according to the present invention comprises:
communication means capable of communicating a signal to/from a plurality of mobile
units; holding means for holding information related to the plurality of mobile
units; search means for searching for a second mobile unit corresponding to position
information contained in a first request signal transmitted from a first mobile unit
by using the information related to the plurality of mobile units held by the
holding means; and generation means for generating a second request signal
containing information related to the first, mobile unit which is to be transmitted
to the second mobile unit thus searched for, wherein the second request signal is
transmitted to the second mobile unit thus searched for.

Summary of Invention Paragraph (19):
[0016] Another server device according to the present invention comprises:
communication means capable of communicating a signal to/from a plurality of mobile
units; holding means for holding information related to the plurality of mobile
units; search means for searching for a second mobile unit corresponding to position
information contained in a first request signal transmitted from a first mobile unit
by using the information related to the plurality of mobile units held by the
holding means; generation means for generating a second request signal to be
transmitted to the second mobile unit thus searched for; storage means for storing
accounting information of users corresponding at least to the first and second
mobile units; and control means for performing control to update the accounting
information of the users corresponding to the first and second mobile units stored
by the storage means. The control means updates the accounting information of the

users corresponding to the first and second mobile units on the basis of data
returned from the second mobile unit in accordance with the second request signal
and data transmitted to the first mobile unit in accordance with the first request
signal.

Summary of Invention Paragraph (20):
[0017] A data communication system according to the present invention is adapted for
carrying out communication among a first mobile unit, a second mobile unit and a
base station. The first mobile unit has first communication, means for transmitting
a first request signal containing the position information of the first mobile unit
to the base station and receiving data, corresponding to the first request signal
from the base station. The base station has prediction means for predicting the
position of the first mobile unit after a predetermined time from the position
information of the first mobile unit contained in the first request signal, search
means for searching for the second mobile unit on the periphery of the position of
the first mobile unit after the predetermined time predicted by the prediction
means, and second communication means for receiving the first request signal,
transmitting a second request signal to the second mobile unit thus searched for,
and returning image data returned from the second mobile unit to the first mobile
unit. The second mobile unit has image pickup means for picking up an image of an
external object and outputting image data, and third communication means for
receiving the second request signal and returning the image data outputted from the
image pickup means to the base station.

Summary of Invention Paragraph (21):
[0018] A data communication method according to the present invention comprises the
steps of: transmitting a first request signal containing position information from a
first mobile unit to a base station; searching for a second mobile unit in
accordance with the position information contained in the first request signal at
the base station; transmitting a second request signal from the base station to the
second mobile unit thus searched for; returning data inputted in accordance with the
second request signal from the second mobile unit to the base station; and
transmitting the data returned from the second mobile unit to the base station in
accordance with the second request signal, from the base station to the first mobile
unit as data corresponding to the first request signal.

Summary of Invention Paragraph (22):
[0019] Another data communication method according to the present invention
comprises the steps of: transmitting a first request signal containing position
information from a first mobile unit to a base station; searching for a second
mobile unit in accordance with the position information contained in the first
request signal at the base station; transmitting a second request signal from the
base station to the second mobile unit thus searched for; returning data inputted in
accordance with the second request signal from the second mobile unit to the base
station; transmitting the data returned from the second mobile unit to the base
station in accordance with the second request signal, from the base station to the
first mobile unit as data corresponding to the first request signal; and updating
accounting information of users corresponding to the first and second mobile units
on the basis of the data returned from the second mobile unit in accordance with the
second request signal and the data transmitted to the first mobile unit in
accordance with the first request signal.

Summary of Invention Paragraph (23):
[0020] Another data communication method according to the present invention
comprises the steps of: searching for a second mobile unit corresponding to position
information contained in a first request signal transmitted from a first mobile unit
in accordance with information related to a plurality of mobile units; generating a
second request signal to be transmitted to the second mobile unit thus searched for;
transmitting the second request signal to the second mobile unit thus searched for;
and transmitting data returned from the second mobile unit to the first mobile unit.

Summary of Invention Paragraph (24):
[0021] Another data communication method according to the present invention
comprises the steps of: searching for a second mobile unit corresponding to position

information contained in a first request signal transmitted from a first mobile unit
in accordance with information related to a plurality of mobile units; generating a
second request signal to be transmitted to the second mobile unit thus searched for;
and updating accounting information of users corresponding to the first and second
mobile units stored in storage means on the basis of data returned from the second
mobile unit in accordance with the second request signal and data transmitted to the
first mobile unit in accordance with the first request signal.

Summary of Invention Paragraph (25):
[0022] According to the present invention, there is also provided a program which is
readable by information processing means, and a program storage medium for storing
this program. The program stored in the storage medium comprises: a step of
transmitting a first request signal containing position information from a first
mobile unit to a base station; a step of searching for a second mobile unit in
accordance with the position information contained in the first request signal at
the base station; a step of transmitting a second request signal from the base
station to the second mobile unit thus searched for; a step of returning data
inputted in accordance with the second request signal from the second mobile unit to
the base station; and a step of transmitting the data returned from the second
mobile unit to the base station in accordance with the second request signal, from
the base station to the first mobile unit as data corresponding to the first request
signal.

Summary of Invention Paragraph (26):
[0023] Another program stored in a program storage medium according to the present
invention comprises: a step of transmitting a first request signal containing
position information from a first mobile unit to a base station; a step of searching
for a second mobile unit in accordance with the position information contained in
the first request signal at the base station; a step of transmitting a second
request signal from the base station to the second mobile unit thus searched for;
and a step of transmitting data inputted in accordance with the second request
signal from the second mobile unit to the first mobile unit as data corresponding to
the first request signal.

Summary of Invention Paragraph (27):
[0024] Another program stored in a program storage medium according to the present
invention comprises: a step of transmitting a first request signal containing
position information from a first mobile unit to a base station; a step of searching
for a second mobile unit in accordance with the position information contained in
the first request signal at the base station; a step of transmitting a second
request signal from the base station to the second mobile unit thus searched for; a
step of returning data inputted in accordance with the second request signal from
the second mobile unit to the base station; a step of transmitting the data returned
from the second mobile unit to the base station in accordance with the second
request signal, from the base station to the first a mobile unit as data
corresponding to the first request signal; and a step of updating accounting
information of users corresponding to the first and second mobile units on the basis
of the data returned from the second mobile unit in accordance with the second
request signal and the data transmitted to the first mobile unit in accordance with
the first request signal.

Summary of Invention Paragraph (28):
[0025] Another program stored in a program storage medium according to the present
invention comprises: when requesting data obtained by another mobile device, a step,
of acquiring position information; a step of transmitting a first request signal
containing position information to an external device; and a step of receiving the
data transmitted from said another mobile device in accordance with the first
request signal; and when providing data to another mobile device, a step of
receiving a second request signal containing information related to another mobile
unit transmitted from the external device; and a step of returning data inputted in
accordance with the second request signal to said another mobile device.

Summary of Invention Paragraph (29):
[0026] Another program stored in a program storage medium according to the present
invention comprises: a step of searching for a second mobile unit corresponding to

position information contained in a first request signal transmitted from a first mobile unit in accordance with information related to a plurality of mobile units; a step of generating a second request signal containing information related to the first mobile unit to be transmitted to the second mobile unit thus searched for; and a step of transmitting the second request signal to the second mobile unit thus searched for.

Summary of Invention Paragraph (30):
[0027] Another program stored in a program storage medium according to the present invention comprises: a step of searching for a second mobile unit corresponding to position information contained in a first request signal transmitted from a first mobile unit in accordance with information related to a plurality of mobile units a step of generating a second request signal to be transmitted to the second mobile unit thus searched for; and a step of updating accounting information of users corresponding to the first and second mobile units stored in storage means on the basis of data returned from the second mobile unit in accordance with the second request signal and data transmitted to the first mobile unit in accordance with the first request signal.

Detail Description Paragraph (3):
[0056] The data communication system to which the present invention is applied has a plurality of mobile stations 4 to 6, which are mobile terminals provided on mobile units, and a base station 2 for transmitting/receiving data to/from the mobile stations 4 to 6 and thus relaying the data, as shown in FIG. 1. Moreover, an accounting management center 7 is provided, if necessary. Although only three mobile stations 4 to 6 are shown in the example of FIG. 1, the number of mobile stations is not limited to three and more mobile stations may exist. Moreover, though only one base station 2 is provided in the example of FIG. 1, a plurality of base stations may be provided. As for the accounting management center 7, only one accounting management center is preferred in order to collectively manage accounting information, which will be described later. However, a plurality of accounting management centers may be provided.

Detail Description Paragraph (4):
[0057] As the mobile stations 4 to 6, mobile terminals which can be carried by walkers or mobile terminals carried on vehicles such as an automobile, motorcycle, bicycle, airplane, helicopter, train, ship and the like may be used. In the following description, a mobile terminal carried on an automobile is used as an example. In this example, the mobile terminal carried on the automobile has a car navigation function makes it possible to receive radio waves from a GPS satellite 1, then find the position of the automobile itself (the terminal itself), the traveling route and the traveling direction, and display such information together with a map showing the vicinity of the position of the automobile. The mobile terminal also has at least a transmitting/receiving unit for transmitting/receiving data to/from the base station 2, and an information acquiring unit for acquiring images, sounds and other information when necessary. The specific structure and operation of the mobile terminal (mobile station) of this example will be described later.

Detail Description Paragraph (10):
[0063] The request information transmitted by the information requesting terminal 6 to the base station 2 may include the following information. That is, the request information includes the identification number of the terminal (because of the need to acquire the history from the user database 3 at the base station 2, as will be described later), a signal indicating the request for information, the position information of its automobile, the form of requested information such as a dynamic image or a static image, the contents of requested information such as information indicating shops, traffic signals and the overall state, and if the user of the information requesting terminal designates information about a desired position, the position information thereof.

Detail Description Paragraph (68):
[0121] The request information preparing unit 32 generates request information containing the identification number of its terminal which is registered in advance, the signal supplied from the information request input unit 31 indicating that the user of the information requesting terminal 6 is requesting information, the

position information of the automobile supplied from the GPS information generating
unit 12, the form of the requested information such as a dynamic image or a static
image, the contents of the requested information such as information showing shops,
traffic signals and overall conditions, and the position information of a place
desired by the user of the terminal, if it is designated. The request
information-preparing unit 32 encodes this request information and sends it to a
transmitting/receiving unit 23.

Detail Description Paragraph (77):
[0130] At step S39, the request information preparing unit 32 generates request
information containing the position information if the information request position
is explicitly stated at step S34, the information showing the form of information
requested by the user which is prepared at step S36 or S38, the identification
number, the signal indicating that the user of the information requesting terminal 6
is requesting information which is explicitly stated at step S32, the position
information of the automobile acquired at step S31, and the contents of the
requested information such as information showing shops, traffic signals and overall
conditions. This request information is coded and sent to the transmitting/receiving
unit 23.

Detail Description Paragraph (190):
[0243] Therefore, the user of the information requesting terminal can learn that the
user cannot go through the railroad crossing because a train is passing there, from
the image provided from the information providing candidate terminal corresponding
to the candidate car mark 104. The user can also learn that there is traffic
congestion at the intersection on Route A, from the image provided from the
information providing candidate terminal corresponding to the candidate car mark
105. The user can also learn that the road on which the candidate car mark 107 is,
situated is under construction and closed, from the image provided from the
information providing candidate terminal corresponding to the candidate car mark
107. Moreover, the user can learn that the intersection which the candidate car mark
106 is approaching is not crowded and is easy to go through, from the image provided
form the information providing candidate terminal corresponding to the candidate car
mark 106.

Detail Description Paragraph (196):
[0249] As described above, the system according to the present invention realizes a
higher degree of freedom with respect to the range of information provision,
compared with the information provision from a fixed camera or the like. That is, it
is possible to easily acquire information about the conditions at a desired position
on the route to be taken by a certain mobile terminal, for example, image
information at a future position on the route of the user's automobile. In other
words, it is possible to provide information acquired by a mobile terminal existing
at a certain position to another mobile terminal existing at a different position,
when necessary.

Detail Description Paragraph (205):
[0258] As described above, according to the present invention, a request signal
containing position information is transmitted from a first mobile unit to a base
station, and the base station searches for a second mobile unit in accordance with
the position information contained in the request signal and causes the second
mobile unit thus searched for to transmit data, thus transmitting the data to the
first mobile unit, or causes the second mobile unit to transmit data directly to the
first mobile unit. Thus, it is possible to easily acquire information about the
conditions at a desired position on the route to be taken by a certain mobile unit,
that is, to provide information acquired by a mobile unit existing at a certain
position to another mobile terminal existing at a different position, when
necessary. According to the present invention, a higher degree of freedom is
realized with respect to the range of information provision, compared with the
information provision from a fixed camera or the like.

Detail Description Paragraph (206):
[0259] Moreover, according to the present invention, it is possible to pay the right
compensation or collect the fee when providing data or receiving the provision of
data, so as to update the accounting information of the users corresponding to the

first and second <u>mobile units</u> on the basis of data; returned from the second <u>mobile unit</u> to the first <u>mobile unit</u>.

CLAIMS:

1. A data communication system comprising: a first <u>mobile unit</u> having first transmission/reception means for transmitting a first request signal containing position information to a base station and receiving data corresponding to the first request signal from the base station; a base station having search means for searching for a second <u>mobile unit</u> in accordance with the position information contained in the first <u>request signal</u>, and second transmission/reception means for receiving the first request signal, transmitting a second request signal to the second <u>mobile unit</u> thus searched for, and returning data returned from the second <u>mobile unit</u> to the first <u>mobile unit</u>; and a second <u>mobile unit</u> having input means for inputting data, and third transmission/reception means for receiving the second request signal and returning the data inputted by the input means in accordance with the second request signal to the base station.

2. The data communication system as claimed in claim 1, wherein the base station has storage means for storing the data returned from the second <u>mobile unit</u>.

3. The data communication system as claimed in claim 2, wherein the base station reads out data corresponding to the first request signal from data stored in the storage means in the past and returns the data to the first <u>mobile unit</u>.

4. The data communication system as claimed in claim 1, wherein the search means of the base station predicts a traveling route of the first <u>mobile unit</u> on the basis of the position information contained in the first request signal, and searches for the second <u>mobile unit</u> by using the predicted traveling route.

5. The data communication system as claimed in claim 2, wherein the storage means stores a plurality of route information on which the first <u>mobile unit</u> traveled in the past, and the search means of the base station extracts route information which overlaps the position information contained in the first request signal, from the plurality of route information, then predicts a traveling route of the first <u>mobile unit</u> on the basis of the extracted route information, and searches for the second <u>mobile unit</u> by using the predicted traveling route.

6. The data communication system as claimed in claim 4, wherein the search means of the base station searches for the second <u>mobile unit</u> on the basis of the information of the traveling route of the first <u>mobile unit</u> as the position information contained in the first request signal.

7. The data communication system as claimed in claim 1, wherein the first <u>mobile unit</u> has selection means for selecting desired data from a plurality of data received in accordance with the first request signal.

8. A data communication system comprising: a first <u>mobile unit</u> having first transmission/reception means for transmitting a first request signal containing position information to a base station and receiving data corresponding to the first request signal; a base station having search means for searching for a second <u>mobile unit</u> in accordance with the position information contained in the first request signal, and second transmission/reception means for receiving the first request signal and transmitting a second request signal containing information related to the first <u>mobile unit</u> to the second <u>mobile unit</u> thus searched for; and a second <u>mobile unit</u> having input means for inputting data, and third transmission/reception means for receiving the second request signal and returning the data inputted by the input means in accordance with the second request signal to the first <u>mobile unit</u>.

9. The data communication system as claimed in claim 8, wherein the second <u>mobile unit</u> has storage means for storing the data inputted by the input means.

10. The data communication system as claimed in claim 9, wherein the second <u>mobile unit</u> reads out data corresponding to the second request signal from data stored in the storage means in the past and returns the data to the first <u>mobile unit</u>.

11. The data communication system as claimed in claim 8, wherein the search means of the base station predicts a traveling route of the first mobile unit on the basis of the position information contained in the first request signal, and searches for the second mobile unit by using the predicted traveling route.

12. The data communication system as claimed in claim 9, wherein the storage means stores a plurality of route information on which the first mobile unit traveled in the past, and the search means of the base station extracts route information which overlaps the position information contained in the first request signal, from the plurality of route information, then predicts a traveling route of the first mobile unit on the basis of the extracted route information, and searches for the second mobile unit by using the predicted traveling route.

13. The data communication system as claimed in claim 11, wherein the search means of the base station searches for the second mobile unit on the basis of the information of the traveling route of the first mobile unit as the position information contained in the first request signal.

14. The data communication system as claimed in claim 8, wherein the first mobile unit has selection means for selecting desired data from a plurality of data received in accordance with the first request signal.

15. A data communication system comprising: a first mobile unit having first transmission/reception means for transmitting a first request signal containing position information to a base station and receiving data corresponding to the first request signal from the base station; a base station having search means for searching for a second mobile unit in accordance with the position information contained in the first request signal, second transmission/reception means for receiving the first request signal, transmitting a second request signal to the second mobile unit thus searched for, and returning data returned from the second mobile unit to the first mobile unit, storage means for storing accounting information of users corresponding at least to the first and second mobile units, and control means for performing control to update the accounting information of the users corresponding to the first and second mobile units stored by the storage means; and a second mobile unit having input means for inputting data, and third transmission/reception means for receiving the second request signal and returning the data inputted by the input means in accordance with the second request signal to the base station 4.

16. The data communication system as claimed in claim 15, wherein the control means performs updating to reduce amount information of accounting information including amount information and account information corresponding to the first mobile unit so that accounting is made to the first mobile unit.

17. The data communication system as claimed in claim 16, wherein the control means performs updating to increase amount information of accounting information including amount information and account information corresponding to the second mobile unit so that compensation corresponding to the data returned to the base station is paid to the second mobile unit.

18. The data communication system as claimed in claim 17, wherein the control means transmits accounting information including an identifier, amount information and account number corresponding to the first mobile unit, and accounting information including an identifier, amount information and account number corresponding to the second mobile unit, to an accounting center via the second transmission/reception means.

19. The data communication system as claimed in claim 15, wherein the base station has storage means for storing the data returned from the second mobile unit.

20. The data communication system as claimed in claim 19, wherein the base station reads out data corresponding to the first request signal from data stored in the storage means in the past and returns the data to the first mobile unit.

21. The data communication system as claimed in claim 15, wherein the search means of the base station predicts a traveling route of the first mobile unit on the basis of the position information contained in the first request signal, and searches for the second mobile unit by using the predicted traveling route.

22. The data communication system as claimed in claim 19, wherein the storage means stores a plurality of route information on which the first mobile unit traveled in the past, and the search means of the base station extracts route information which overlaps the position information contained in the first request signal, from the plurality of route information, then predicts a traveling route of the first mobile unit on the basis of the extracted route information, and searches for the second mobile unit by using the predicted traveling route.

23. The data communication system as claimed in claim 21, wherein the search means of the base station searches for the second mobile unit on the basis of the information of the traveling route of the first mobile unit as the position information contained in the first request signal.

24. The data communication system as claimed in claim 15, wherein the first mobile unit has selection means for selecting desired data from a plurality of data received in accordance with the first request signal.

35. A server device comprising: communication means capable of communicating a signal to/from a plurality of mobile units; holding means for holding information related to the plurality of mobile units; search means for searching for a second mobile unit corresponding to position information contained in a first request signal transmitted from a first mobile unit by using the information related to the plurality of mobile units held by the holding means; and generation means for generating a second request signal to be transmitted to the second mobile unit thus searched for; wherein the second request signal is transmitted to the second mobile unit thus searched for and data returned from the second mobile unit is returned to the first mobile unit.

36. The server device as claimed in claim 35, further comprising storage means for storing the data returned from the second mobile unit.

37. The server device as claimed in claim 36, wherein data corresponding to the first request signal is read out from data stored in the storage means in the past and is returned to the first mobile unit.

38. The server device as claimed in claim 35, wherein the search means predicts a traveling route of the first mobile unit on the basis of the position information contained in the first request signal, and searches for the second mobile unit by using the predicted traveling route.

39. The server device as claimed in claim 36, wherein the holding means stores a plurality of route information on which the first mobile unit traveled in the past, and the search means extracts route information which overlaps the position information contained in the first request, signal from the plurality of route information, then predicts a traveling route of the first mobile unit on the basis of the extracted route information, and searches for the second mobile unit by using the predicted traveling route.

40. The server device as claimed in claim 38, wherein the search means searches for the second mobile unit on the basis of the information of the traveling route, of the first mobile unit as the position information contained in the first request signal.

41. A server device comprising: communication means capable of communicating a signal to/from a plurality of mobile units; holding means for holding information related to the plurality of mobile units; search means for searching for a second mobile unit corresponding to position information contained in a first request signal transmitted from a first mobile unit by using the information related to the plurality of mobile units held by the holding means; and generation means for generating a second request signal containing information related to the first

mobile unit which is to be transmitted to the second mobile unit thus searched for; wherein the second request signal is transmitted to the second mobile unit thus searched for.

42. The server device as claimed in claim 41, wherein the search means predicts a traveling route of the first mobile unit on the basis of the position information contained in the first request signal, and searches for the second mobile unit by using the predicted traveling route.

43. The server device as claimed in claim 41, wherein the holding means stores a plurality of route information on which the first mobile unit traveled in the past, and the search means extracts route information which overlaps the position information contained in the first request signal from the plurality of route information, then predicts a traveling route of the first mobile unit on the basis of the extracted route information, and searches for the second mobile unit by using the predicted traveling route.

44. The server device as claimed in claim 42, wherein the search means searches for the second mobile unit on the basis of the information of the traveling route of the first mobile unit as the position information contained in the first request signal.

45. A server device comprising: communication means capable of communicating a signal to/from a plurality of mobile units; holding means for holding information related to the plurality of mobile units; search means for searching for a second mobile unit corresponding to position information contained in a first request signal transmitted from a first mobile unit by using the information related to the plurality of mobile units held by the holding means; generation means for generating a second request signal to be transmitted to the second mobile unit thus searched for; storage means for storing accounting information of users corresponding at least to the first and second mobile units; and control means for performing control to update the accounting information of the users corresponding to the first and second mobile units stored by the storage means; wherein the control means updates the accounting information of the users corresponding to the first and second mobile units on the basis of data returned from the second mobile unit in accordance with the second request signal and data transmitted to the first mobile unit in accordance with the first request signal.

46. The server device as claimed in claim 45, wherein the control means performs updating to reduce amount information of accounting information including amount information and account information corresponding to the first mobile unit so that accounting is made to the first mobile unit.

47. The server device as claimed in claim 46, wherein the control means performs updating to increase amount information of accounting information including amount information and account information corresponding to the second mobile unit so that compensation corresponding to the data returned to the server device is paid to the second mobile unit.

48. The server device as claimed in claim 47, wherein the control means transmits accounting information including an identifier, amount information and account number corresponding to the first mobile unit, and accounting information including an identifier, amount information and account number corresponding to the second mobile unit, to an accounting center via the communication means.

49. The server device as claimed in claim 45, further comprising storage means for storing the data returned from the second mobile unit.

50. The server device as claimed in claim 49, wherein the control means reads out data corresponding to the first request signal from data stored in the storage means in the past and returns it to the first mobile unit.

51. The server device as claimed in claim 45, wherein the search means predicts a traveling route of the first mobile unit on the basis of the position information contained in the first request signal, and searches for the second mobile unit by

using the predicted traveling route.

52. The server device as claimed in claim 49, wherein the holding means stores a plurality of route information on which the first mobile unit traveled in the past, and the search means extracts route information which overlaps the position information contained in the first request signal from the plurality of route information, then predicts a traveling route of the first mobile unit on the basis of the extracted route information, and searches for the second mobile unit by using the predicted traveling route.

53. The server device as claimed in claim 51, wherein the search means searches for the second mobile unit on the basis of the information of the traveling route of the first mobile unit as the position information contained in the first request signal.

54. A data communication system for carrying out communication among a first mobile unit, a second mobile unit and a base station, the first mobile unit comprising first communication means for transmitting a first request signal containing the position information of the first mobile unit to the base station and receiving data corresponding to the first request signal from the base station, the base station comprising prediction means for predicting the position of the first mobile unit after a predetermined time from the position information of the first mobile unit contained in the first request signal, search means for searching for the second mobile unit on the periphery of the position of the first mobile unit after the predetermined time predicted by the prediction means, and second communication means for receiving the first request signal, transmitting a second request signal to the second mobile unit thus searched for, and returning image data returned from the second mobile unit to the first mobile unit, the second mobile unit comprising image pickup means for picking up an image of an external object and outputting image data, and third communication means for receiving the second request signal and returning the image data outputted from the image pickup means to the base station.

55. A data communication method comprising the steps of: transmitting a first request signal containing position information from a first mobile unit to a base station; searching for a second mobile unit in accordance with the position information contained in the first request signal at the base station; transmitting a second request signal from the base station to the second mobile unit thus searched for; returning data inputted in accordance with the second request signal from the second mobile unit to the base station; and transmitting the data returned from the second mobile unit to the base station in accordance with the second request signal, from the base station to the first mobile unit as data corresponding to the first request signal.

56. A data communication method comprising the steps of: transmitting a first request signal containing position information from a first mobile unit to a base station; searching for a second mobile unit in accordance with the position information contained in the first request signal at the base station; transmitting a second request signal to the second mobile unit thus searched for from the base station; and transmitting data inputted in accordance with the second request signal from the a second mobile unit to the first mobile unit as data corresponding to the first request signal.

57. A data communication method comprising the steps of: transmitting a first request signal containing position information from a first mobile unit to a base station; searching for a second mobile unit in accordance with the position information contained in the first request signal at the base station; transmitting a second request signal from the base station to the second mobile unit thus searched for; returning data inputted in accordance with the second request signal from the second mobile unit to the base station; transmitting the data returned from the second mobile unit to the base station in accordance with the second request signal, from the base station to the first mobile unit as data corresponding to the first request signal; and updating accounting information of users corresponding to the first and second mobile units on the basis of the data returned from the second mobile unit in accordance with the second request signal and the data transmitted to the first mobile unit in accordance with the first request signal.

60. A data communication method comprising the steps of: searching for a second mobile unit corresponding to position information contained in a first request signal transmitted from a first mobile unit in accordance with information related to a plurality of mobile units; generating a second request signal to be transmitted to the second mobile unit thus searched for; transmitting the second request signal to the second mobile unit thus searched for; and transmitting data returned from the second mobile unit to the first mobile unit.

61. A data communication method comprising the steps of: searching for a second mobile unit corresponding to position information contained in a first request signal transmitted from a first mobile unit in accordance with information related to a plurality of mobile units; generating a second request signal containing information related to the first mobile unit to be transmitted to the second mobile unit thus searched for; and transmitting the second request signal to the second mobile unit thus searched for.

62. A data communication method comprising the steps of: searching for a second mobile unit corresponding to position information contained in a first request signal transmitted from a first mobile unit in accordance with information related to a plurality of mobile units; generating a second request signal to be transmitted to the second mobile unit thus searched for; and updating accounting information of users corresponding to the first and second mobile units stored in storage means on the basis of data returned from the second mobile unit in accordance with the second request signal and data transmitted to the first mobile unit in accordance with the first request signal.

63. A program storage medium in which a program readable by information processing means is stored, the program comprising: a step of transmitting a first request signal containing position information from a first mobile unit to a base station; a step of searching for a second mobile unit in accordance with the position information contained in the first request signal at the base station; a step of transmitting a second request signal from the base station to the second mobile unit thus searched for; a step of returning data inputted in accordance with the second request signal from the second mobile unit to the base station; and a step of transmitting the data returned from the second mobile unit to the base station in accordance with the second request signal, from the base station to the first mobile unit as data corresponding to the first request signal.

64. A program storage medium in which a program readably by information processing means is stored, the program comprising: a step of transmitting a first request signal containing position information from a first mobile unit to a base station; a step of searching for a second mobile unit in accordance with the position information contained in the first request signal at the base station; a step of transmitting a second request signal from the base station to the second, mobile unit thus searched for; and a step of transmitting data inputted in accordance with the second request signal from the second mobile unit to the first mobile unit as data corresponding to the first request signal.

65. A program storage medium in which a program readably by information processing means is stored, the program comprising: a step of transmitting a first request signal containing position information from a first mobile unit to a base station; a step of searching for a second mobile unit in accordance with the position information contained in the first request signal at the base station; a step of transmitting a second request signal from the base station to the second mobile unit thus searched for; a step of returning data inputted in accordance with the second request signal from the second mobile unit to the base station; a step of transmitting the data returned from the second mobile unit to the base station in accordance with the second request signal, from the base station to the first mobile unit as data corresponding to the first request signal; and a step of updating accounting information of users corresponding to the first and second mobile units on the basis of the data returned from the second mobile unit in accordance with the second request signal and the data transmitted to the first mobile unit in accordance with the first request signal.

67. A program storage medium in which a program readably by information processing means is stored, the program comprising: when requesting data obtained by another mobile device, a step of acquiring position information; a step of transmitting a first request signal containing position information to an external device; and a step of receiving the data transmitted from said another mobile device in accordance with the first request signal; and when providing data to another mobile device, a step of receiving a second request signal containing information related to another mobile unit transmitted from an external device; and a step of returning data inputted in accordance with the second request signal to said another mobile device.

68. A program storage medium in which a program readable by information processing means is stored, the program comprising: a step of searching for a second mobile unit corresponding to position information contained in a first request signal transmitted from a first mobile unit in accordance with information related to a plurality of mobile units; a step of generating a second request signal to be transmitted to the second mobile unit thus searched for; a step of transmitting the second request signal to the second mobile unit thus searched for; and a step of transmitting data returned from the second mobile unit to the first mobile unit.

69. A program storage medium in which a program readable by information processing means is stored, the program comprising: a step of searching for a second mobile unit corresponding to position information contained in a first request signal transmitted from a first mobile unit in accordance with information related to a plurality of mobile units; a step of generating a second request signal containing information related to the first mobile unit to be transmitted to the second mobile unit thus searched for; and a step of transmitting the second request signal to the second mobile unit thus searched for.

70. A program storage medium in which a program readable by information processing means is stored, the program comprising: a step of searching for a second mobile unit corresponding to position information contained in a first request signal transmitted from a first mobile unit in accordance with information related to a plurality of mobile units; a step of generating a second request signal to be transmitted to the second mobile unit thus searched for; and a step of updating accounting information of users corresponding to the first and second mobile units stored in storage means on the basis of data returned from the second mobile unit in accordance with the second request signal and data transmitted to the first mobile unit in accordance with the first request signal.

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Search Results -

Terms	Documents
17 and L8	15

Database:
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Search: L9 | Refine Search |

| Recall Text | Clear |

Search History

DATE: Monday, September 29, 2003   Printable Copy   Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L9	l7 and L8	15	L9
L8	traffic adj information	7403	L8
L7	l1 and L6	1290	L7
L6	rate	1847866	L6
L5	l1 and L4	0	L5
L4	rate near occurrence	3855	L4
L3	l1 and L2	2	L3
L2	learn$ adj (route or road)	144	L2
L1	frequen$3 near (route or road)	2565	L1

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Search Results -

Terms	Documents
l14 and L15	0

Database:
- US Patents Full-Text Database
- US Pre-Grant Publication Full-Text Database
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- EPO Abstracts Database
- Derwent World Patents Index
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Search: L16

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Search History

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L16	l14 and L15	0	L16
L15	learn$ adj route	122	L15
L14	l10 same L13	27	L14
L13	navigation	68288	L13
L12	L10 and l1	7	L12
L11	L10 near l1	0	L11
L10	weighted adj average	11478	L10
L9	l7 and L8	15	L9
L8	traffic adj information	7403	L8
L7	l1 and L6	1290	L7
L6	rate	1847866	L6
L5	l1 and L4	0	L5
L4	rate near occurrence	3855	L4
L3	l1 and L2	2	L3
L2	learn$ adj (route or road)	144	L2
L1	frequen$3 near (route or road)	2565	L1

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L9: Entry 1 of 1   File: USPT   Sep 2, 2003

DOCUMENT-IDENTIFIER: US 6615134 B2
TITLE: Data communication system and method, and mobile body apparatus

US Patent No. (1):
6615134

Brief Summary Text (4):
Conventionally, a moving route display device or a traveling route display device
has been practically used in which the positions of various mobile units such as
automobiles, ships, aircrafts and the like are traced and, displayed on a map
displayed on, for example, a color display screen of a cathode ray tube (CRT) or a
liquid crystal display on the basis of position information obtained by a position
measuring system such as the GPS (Global Positioning System). The GPS is a system
for detecting the present absolute position and traveling direction of an automobile
or the like, specifically, a GPS receiving terminal carried on an automobile or the
like, by using radio waves from 24 geostationary satellites (GPS satellites)
launched by the U.S. Department of Defense. Each GPS satellite is sending time
information, orbit information and the like. A GPS receiving terminal receives radio
waves from four satellites and calculates the distance from each of the satellites,
and thus can specify the position and time of the terminal itself from the
longitude, latitude and altitude. As a so-called car navigation system, which is a
system for displaying the traveling route of an automobile, there exists a
self-contained navigation system using a geomagnetic sensor, a car speed sensor, map
matching and the like, or a system using so-called beacon, signpost and the like and
also using a car speed sensor, map matching, a direction sensor and the like, as
well as the GPS.

Brief Summary Text (5):
Of the above-described conventional moving route display devices, in a car
navigation system which is becoming particularly popular recently, it is possible to
display not only a traveling route that is already taken by an automobile (mobile
unit) but also a route to be taken by, the automobile, for example, a route to a
certain destination, and also to guide the user on the route to the destination
using voices and images.

Brief Summary Text (12):
In this case, the base station has storage means for storing the data returned from
the second mobile unit, and the storage means stores a plurality of route
information on which the first mobile unit traveled in the past. The search means of
the base station extracts route information which overlaps the position information
contained in the first request signal, from the plurality of route information
stored in the storage means, then predicts a traveling route of the first mobile
unit on the basis of the extracted route information, and searches for the second
mobile unit by using the predicted traveling route.

Detailed Description Text (4):
As the mobile stations 4 to 6, mobile terminals which can be carried by walkers or
mobile terminals carried on vehicles such as an automobile, motorcycle, bicycle,
airplane, helicopter, train, ship and the like may be used. In the following
description, a mobile terminal carried on an automobile is used as an example. In
this example, the mobile terminal carried on the automobile has a car navigation

function makes it possible to receive radio waves from a GPS satellite 1, then find the position of the automobile itself (the terminal itself), the traveling route and the traveling direction, and display such information together with a map showing the vicinity of the position of the automobile. The mobile terminal also has at least a transmitting/receiving unit for transmitting/receiving data to/from the base station 2, and an information acquiring unit for acquiring images, sounds and other information when necessary. The specific structure and operation of the mobile terminal (mobile station) of this example will be described later.

Detailed Description Text (5):
Each mobile station operates, for example, as a mobile station in which the user explicitly shows the intention to provide information acquired by the information acquiring unit to another user (i.e., the mobile station 4 in the example of FIG. 1, which is hereinafter suitably referred to as information providing candidate terminal 4), or as a mobile station in which the user explicitly shows a request for acquiring information related to the traveling direction of the user's automobile, for example, an image of a position to be reached by the user's automobile in the future (i.e., the mobile station 6 in the example of FIG. 1, which is hereinafter suitably referred to as information requesting terminal 6), or as a mobile station which provides information acquired by the information acquiring unit to another user (i.e., the mobile station 5 in the example of FIG. 1, which is hereinafter suitably referred to as information providing terminal 5). It is preferred that each mobile station has all the three functions of an information providing candidate terminal, an information requesting terminal and an information providing terminal. However, each mobile station may have only the functions of an information providing candidate terminal and an information providing terminal. The information providing candidate terminal must have the function of an information providing terminal.

Detailed Description Text (8):
Moreover, the base station 2 stores the data returned from the information providing candidate terminal 4 into the database 3. Information about a plurality of routes on which the information providing candidate terminal 4 traveled in the past is also stored in the database 3.

Detailed Description Text (9):
On the other hand, the information requesting terminal 6 transmits information to the effect that the terminal requests for information related to the traveling direction of its automobile (hereinafter referred to as request information) to the base station 2 as the processing T2 shown in FIG. 2, when the user explicitly shows a request for acquiring the information related to the traveling direction of the automobile for example, an image of a position to be reached by the automobile in the future.

Detailed Description Text (11):
The information requesting terminal 6 may constantly request the base station 2 for the information related to the traveling direction of its automobile, not only when the user of the terminal explicitly shows the intention or request for acquiring the information. In the following description, the case where the request information is transmitted to the base station when the user explicitly shows the intention or request for acquiring the information related to the traveling direction of the automobile, will be used as an example. Image information is used as the information requested by the information requesting terminal 6, for example, as the information related to the traveling direction of its automobile.

Detailed Description Text (12):
When the request information is transmitted from the information requesting terminal 6, the base station 2 takes out the position information of the information requesting terminal 6 from the request information and predictively calculates the traveling route of the information requesting terminal 6 on the basis of the position information and the past input history information from the information requesting terminal 6, as the processing P2 shown in FIG. 2.

Detailed Description Text (13):
Next, the base station 2 determines whether or not an information providing candidate terminal exists on the traveling route of the information requesting

terminal 6 on the basis of the traveling route of the information requesting
terminal 6 and the position information of other information providing candidate
terminals saved in the user database 3, as the processing P3 shown in FIG. 2. If an
information providing candidate terminal exists on the traveling route, the base
station 2 selects that information providing candidate terminal as an information
providing terminal. In the example of FIG. 1, it is selected as the information
providing terminal 5. Moreover, the base station 2 requests the information
providing terminal 5 for acquisition of image information at a desired position on
the traveling route that is predictively calculated and transmission of the acquired
image information, as the processing T3 shown in FIG. 2.

Detailed Description Text (14):
On receiving the image information transmission request from the base station 2, the
information providing terminal 5 acquires image information by using the information
acquiring unit at the desired position on the traveling route, which is the position
where the request is made, as the processing P4 shown in FIG. 2. Then, the,
information providing terminal 5 returns the acquired image information to the base
station 2 as the processing T4 shown in FIG. 2. In the case where image information
is acquired at the information providing terminal 5 as in this embodiment, the
information acquiring unit of the information providing terminal 5 has a video
camera for shooting, for example, a forward image in front of the vehicle.

Detailed Description Text (16):
Thus, the information requesting terminal 6 can acquire the image information
provided by the information providing terminal 5 as the information related to the
traveling direction of its automobile. As the processing P5 shown in FIG. 2, the
information requesting terminal 6 enables presentation of the image, for example,
display of the image on the display of the car navigation device.

Detailed Description Text (65):
The GPS information generating unit 12 specifies the position of its automobile and
the time on the basis of time information and orbit information contained in the GPS
signal, and sends the position and traveling route information as GPS information to
an information presenting unit 13 and sends at least the position information to a
request information preparing unit 32.

Detailed Description Text (66):
On the basis of the position and traveling route information and the time
information from the GPS information generating unit 12, the information presenting
unit 13 traces and displays the position of its automobile on a guide map showing
the vicinity of the position of the automobile, similarly to a typical car
navigation device.

Detailed Description Text (67):
An information request input unit 31 has input means as a user interface based on,
for example, hardware or software. The information request input unit 31 is operated
by the user of the information requesting terminal 6 when the user explicitly shows
to the base station 2 whether or not the user has the intention to request image
information such as a static image or a dynamic image of a desired position in the
traveling direction of the user's automobile. When the user has the intention to
request information from the base station 2, a signal to that effect is outputted
and sent from the information request input unit 31 to the request information
preparing unit 32.

Detailed Description Text (72):
In FIG. 9, at step S31, the GPS receiving unit 11 and the GPS information generating
unit 12 of the information requesting terminal 6 receive radio waves from the GPS
satellite 1 and acquire at least information about the position and the traveling
direction of its automobile. The position and the traveling direction information
are sent to the information presenting unit 13 and the position information is sent
to the request information preparing unit 32.

Detailed Description Text (85):
An information request input unit 31 is operated by the user of the corresponding
terminal when the user explicitly shows to the base station 2 whether the user has

the intention to request, for example, image information about a desired position in the traveling direction of the user's automobile. The information request input unit 31 is operated when the user has the intention to request information from the base station 2, and a signal to that effect is outputted and sent from the information request input unit 31 to the request information preparing unit 32.

Detailed Description Text (122):
At step S55, the route predicting unit 43 predicts the route of the information requesting terminal on the basis of the history of the past position information. The route predicting unit 43 predicts the traveling route on the basis of the history of the route information corresponding to the information requesting terminal 6 stored in the user database 3. For example, it is assumed that all the route information that was searched for by the route search function of the car navigation device loaded on the information requesting terminal 6 is stored in the user database 3.

Detailed Description Text (138):
In the above-described example, the route of the information requesting terminal or the information providing terminal is predicted at the base station 2. However, as in another example of the present invention, which will be described hereinafter, it is also possible to predict the route at each mobile station and transmit the position information on the predicted route to the base station 2. In such a case, the position information includes, for example, the present position information, the present traveling speed, the present traveling direction, and the predicted route.

Detailed Description Text (144):
The transmission signal generating unit 62 predicts the route of the terminal on the basis of the history of the position information including the present position read out from the memory 61. Specifically, on the basis of the present position information; the present traveling speed and the present traveling direction, the transmission signal generating unit 62 calculates the predicted route on the assumption of a constant velocity. When a signal indicating that the user has the intention to provide information to another terminal is supplied from the information provision approval S/W unit 14, the transmission signal generating unit 62 generates a transmission signal from the signal supplied from the information provision approval S/W unit 14, the present position information, the present traveling speed information, the present traveling direction information and the predicted route information, and sends the transmission signal to a transmitting unit 15.

Detailed Description Text (145):
Thus, the signal indicating that the user has the intention to provide information to another terminal, and the present position information, the present traveling speed information, the present traveling direction information and the predicted route information of the information providing candidate terminal 4 are transmitted to the base station 2. Therefore, in this example, the base station 2 need not predict the route of the information providing candidate terminal 4.

Detailed Description Text (147):
Moreover, the information outputted from the transmitting unit 15 at step S3 includes the route information predicted by the information providing candidate terminal 4 on the basis of the position information read out from the memory 61, the present position information, the present traveling speed information, and the present traveling direction information.

Detailed Description Text (160):
A request information preparing unit 32 generates request information. In this case, the request information preparing unit 32 predicts the route of the terminal by using the history of the position information stored in the memory 61 as well as the position information from the GPS information generating unit 12 as the position information of the automobile, and includes the route information, the present position information, the present traveling speed information and the present traveling direction information in the request information. Similar to the above-described case, the route of the information requesting terminal 6 can be

predicted on the assumption of a constant velocity, on the basis of the present position information, the present traveling speed information and the present traveling direction information. The request information is sent to the base station 2 via a transmitting/receiving unit 23.

Detailed Description Text (161):
The flow of processing at the information requesting terminal 6 shown in FIG. 17 is substantially similar to that of FIG. 9. However, in the case of the information requesting terminal 6 of this example, the processing to store the acquired position information in the memory 61 is added at step S31 shown in FIG. 9, and the route information predicted from the position information read out from the memory 61, the present position information, the present traveling speed information and the present traveling direction information are included in the request information prepared at step S39.

Detailed Description Text (163):
In the structure as shown in FIG. 18, position information stored in a memory 61 is read out and sent to a transmission signal generating unit 62 under the control of a GPS information generating unit 12. The transmission signal generating unit 62 predicts the route of the terminal on the basis of the history of the, position information including the present position read out from the memory 61. The method for route prediction may be similar to the above-described method. When a signal indicating that the user has the intention to provide information to another terminal is supplied from an information provision approval S/W unit 14, the transmission signal generating unit 62 generates a transmission signal from the signal supplied from the information provision approval S/W unit 14, the route information, the present position information, the present traveling speed information and the present traveling direction information, and sends the transmission signal to a transmitting/receiving unit 23.

Detailed Description Text (165):
A request information preparing unit 32 predicts the route of the terminal by, using the history of the position information stored in the memory 61 as well as the position information from the GPS information generating unit 12, and includes the route information, the present position information; the present traveling speed, information and the present traveling direction information in the request information. The route prediction processing at the transmission signal generating unit 62, the information acquisition control unit 21 and the request information preparing unit 32 may be made common. The request information is sent to the base station 2 via the transmitting/receiving unit 23.

Detailed Description Text (167):
The base station 2 shown in FIG. 19 need not have the route predicting unit 43 of FIG. 11. An information extracting unit 42 sends the route information, the present position information, the present traveling speed information and the present traveling direction information, of the information extracted from the request information supplied from the information requesting terminal 6, to a providing terminal search unit 45.

Detailed Description Text (168):
The providing terminal search unit 45 determines whether or not an information providing candidate terminal exists on the route of the information requesting terminal or at a position desired by the user of the information requesting terminal, by using the position information of each information providing candidate terminal stored in a user database 3, and the route information, the present position information, the present a traveling speed information and the present traveling direction information extracted from the request information.

Detailed Description Text (184):
In the main image display area 101 in the case where the terminal functions as a typical car navigation device, a map showing the vicinity of the position of the user's car, for example, a map which is easy to recognize such as a plan view or a bird's eye view, a user's car mark 102 representing the position of the user's automobile and its traveling direction (upward, in this example), and a cursor 103 are displayed.

Detailed Description Text (186):
When the information request button 121 in the operation area 120 is ON to cause the
mobile station of this example to operate as the information requesting terminal as
described above, candidate car marks (in the example of FIG. 24, four candidate car
marks 104 to 107) representing a plurality of information providing candidate
terminals in the traveling direction of the user's automobile are displayed together
with the map and the user's car mark 102 in the main image display area 101.

CLAIMS:

2. The data communication system as claimed in claim 1, wherein the search means of
the base station predicts a traveling route of the first mobile unit on the basis of
the position information contained in the first request signal, and searches for the
second mobile unit by using the predicted traveling route.

4. A data communication system comprising: a first mobile unit having first
transmission/reception means for transmitting a first request signal containing
position information to a base station and receiving data corresponding to the first
request signal from the base station; a base station having search means for
searching for a second mobile unit in accordance with the position information
contained in the first request signal, and second transmission/reception means for
receiving the first request signal, transmitting a second request signal to the
second mobile unit thus searched for, and returning data returned from the second
mobile unit to the first mobile unit; a second mobile unit having input means for
inputting data, and third transmission/reception means for receiving the second
request signal and returning the data inputted by the input means in accordance with
the second request signal to the base station; wherein the base station has storage
means for storing the data returned from the second mobile unit; and wherein the
storage means stores a plurality of route information on which the first mobile unit
traveled in the past, and the search means of the base station extracts route
information which overlaps the position information contained in the first request
signal, from the plurality of route information, then predicts a traveling route of
the first mobile unit on the basis of the extracted route information, and searches
for the second mobile unit by using the predicted traveling route.

5. A data communication system comprising: a first mobile unit having first
transmission/reception means for transmitting a first request signal containing
position information to a base station and receiving data corresponding to the first
request signal from the base station; a base station having search means for
searching for a second mobile unit in accordance with the position information
contained in the first request signal, and second transmission/reception means for
receiving the first request signal, transmitting a second request signal to the
second mobile unit thus searched for, and returning data returned from the second
mobile unit to the first mobile unit; a second mobile unit having input means for
inputting data, and third transmission/reception means for receiving the second
request signal and returning the data inputted by the input means in accordance with
the second request signal to the base station; wherein the search means of the base
station predicts a traveling route of the first mobile unit on the basis of the
position information contained in the first request signal, and searches for the
second mobile unit by using the predicted traveling route; and wherein the search
means of the base station searches for the second mobile unit on the basis of the
information of the traveling route of the first mobile unit as the position
information contained in the first request signal.

7. The data communication system as claimed in claim 6, wherein the search means of
the base station predicts a traveling route of the first mobile unit on the basis of
the position information contained in the first request signal, and searches for the
second mobile unit by using the predicted traveling route.

8. The data communication system as claimed in claim 7, wherein the search means of
the base station searches for the second mobile unit on the basis of the information
of the traveling route of the first mobile unit as the position information
contained in the first request signal.

10. A data communication system comprising: a first mobile unit having first transmission/reception means for transmitting a first request signal containing position information to a base station and receiving data corresponding to the first request signal; a base station having search means for searching for a second mobile unit in accordance with the position information contained in the first request signal, and second transmission/reception means for receiving the first request signal and transmitting a second request signal containing information related to the first mobile unit to the second mobile unit thus searched for; and a second mobile unit having input means for inputting data, and third transmission/reception means for receiving the second request signal and returning the data inputted by the input means in accordance with the second request signal to the first mobile unit, wherein the second mobile unit has storage means for storing the data inputted by the input means; and wherein the storage means stores a plurality of route information on which the first mobile unit traveled in the past, and the search means of the base station extracts route information which overlaps the position information contained in the first request signal, from the plurality of route information, then predicts a traveling route of the first mobile unit on the basis of the extracted route information, and searches for the second mobile unit by using the predicted traveling route.

14. The data communication system as claimed in claim 11, wherein the search means of the base station predicts a traveling route of the first mobile unit on the basis of the position information contained in the first request signal, and searches for the second mobile unit by using the predicted traveling route.

15. The data communication system as claimed in claim 14, wherein the search means of the base station searches for the second mobile unit on the basis of the information of the traveling route of the first mobile unit as the position information contained in the first request signal.

20. A data communication system comprising: a first mobile unit having first transmission/reception means for transmitting a first request signal containing position information to a base station and receiving data corresponding to the first request signal from the base station; a base station having search means for searching for a second mobile unit in accordance with the position information contained in the first request signal, second transmission/reception means for receiving the first request signal, transmitting a second request signal to the second mobile unit thus searched for, and returning data returned from the second mobile unit to the first mobile unit, storage means for storing accounting information of users corresponding at least to the first and second mobile units, and control means for performing control to update the accounting information of the users corresponding to the first and second mobile units stored by the storage means; and a second mobile unit having input means for inputting data, and third transmission/reception means for receiving the second request signal and returning the data inputted by the input means in accordance with the second request signal to the base station; wherein the base station has storage means for storing the data returned from the second mobile unit; and wherein the storage means stores a plurality of route information on which the first mobile unit traveled in the past, and the search means of the base station extracts route information which overlaps the position information contained in the first request signal, from the plurality of route information, then predicts a traveling route of the first mobile unit on the basis of the extracted route information, and searches for the second mobile unit by using the predicted traveling route.

21. A mobile device comprising: position information acquisition means for acquiring position information; signal generation means for generating a first request signal containing the position information; input means for inputting data; communication means for communicating a signal to/from an external device; wherein when requesting data from the external device, the communication means transmits the first request signal containing the position information to the external device and receives data returned from the external device in accordance with the first request signal; and when providing data to the external device, the communication means receives a second request signal transmitted from the external device and returns data inputted by the input means in accordance with the second request signal to the external device; prediction means for predicting a traveling route of the mobile device from

the position information, and the information of the <u>traveling</u> route is contained in the position information; and storage means for storing a plurality of route information on which the mobile device <u>traveled</u> in the past; wherein the prediction means extracts route information which overlaps the position information of the mobile device acquired by the position information acquisition means, from the plurality of route information, then predicts a <u>traveling</u> route of the mobile device on the basis of the extracted route information, and updates the position information of the mobile device to the information of the predicted <u>traveling</u> route.

24. A mobile device comprising: position information acquisition means for acquiring position information; signal generation means for generating a first request signal containing the position information; input means for inputting data; communication means for communicating a signal to/from an external device or another mobile device; prediction means for predicting a <u>traveling</u> route of the mobile device from the position information, and the information of the <u>traveling</u> route is contained in the position information; and storage means for storing a plurality of route information on which the mobile device <u>traveled</u> in the past; wherein when requesting data obtained by another mobile device, the communication means transmits the first request signal containing the position information to the external device and receives data returned from said another mobile device in accordance with the first request signal; when providing data to another mobile device, the communication means receives a second request signal containing information related to said another mobile device transmitted from the external device and returns data inputted by the input means in accordance with the second request signal to said another mobile device; and wherein the prediction means extracts route information which overlaps the position information of the mobile device acquired by the position information acquisition means, from the plurality of route information, then predicts a <u>traveling</u> route of the mobile device on the basis of the extracted route information, and updates the position information of the mobile device to the information of the predicted <u>traveling</u> route.

28. The server device as claimed in claim 27, wherein the search means predicts a <u>traveling</u> route of the first mobile unit on the basis of the position information contained in the first request signal, and searches for the second mobile unit by using the predicted <u>traveling</u> route.

29. The server device as claimed in claim 28, wherein the search means searches for the second mobile unit on the basis of the information of the <u>traveling</u> route of the first mobile unit as the position information contained in the first request signal.

30. A server device comprising: communication means capable of communicating a signal to/from a plurality of mobile units; holding means for holding information related to the plurality of mobile units; search means for searching for a second mobile unit corresponding to position information contained in a first request signal transmitted from a first mobile unit by using the information related to the plurality of mobile units held by the holding means; generation means for generating a second request signal to be transmitted to the second mobile unit thus searched for; and storage means for storing the data returned from the second mobile unit; wherein the holding means stores a plurality of route information on which the first mobile unit <u>traveled</u> in the past, and the search means extracts route information which overlaps the position information contained in the first request signal from the plurality of route information, then predicts a <u>traveling</u> route of the first mobile unit on the basis of the extracted route information, and searches for the second mobile unit by using the predicted <u>traveling</u> route; and wherein the second request signal is transmitted to the second mobile unit thus searched for and data returned from the second mobile unit is returned to the first mobile unit.

31. A server device comprising: communication means capable of communicating a signal to/from a plurality of mobile units; holding means for holding information related to the plurality of mobile units; search means for searching for a second mobile unit corresponding to position information contained in a first request signal transmitted from a first mobile unit by using the information related to the plurality of mobile units held by the holding means; wherein the holding means

stores a plurality of route information on which the first mobile unit <u>traveled</u> in
the past, and the search means extracts route information which overlaps the
position information contained in the first request signal from the plurality of
route information, then predicts a <u>traveling</u> route of the first mobile unit on the
basis of the extracted route information, and searches for the second mobile unit by
using the predicted <u>traveling</u> route; and generation means for generating a second
request signal containing information related to the first mobile unit which is to
be transmitted to the second mobile unit thus searched for; wherein the second
request signal is transmitted to the second mobile unit thus searched for.

32. The server device as claimed in claim 31, wherein the search means predicts a
<u>traveling</u> route of the first mobile unit on the basis of the position information
contained in the first request signal, and searches for the second mobile unit by
using the predicted <u>traveling</u> route.

33. The server device as claimed in claim 32, wherein the search means searches for
the second mobile unit on the basis of the information of the <u>traveling</u> route of the
first mobile unit as the position information contained in the first request signal.

40. The server device as claimed in claim 38, wherein the holding means stores a
plurality of route information on which the first mobile unit <u>traveled</u> in the past,
and the search means extracts route information which overlaps the position
information contained in the first request signal from the plurality of route
information, then predicts a <u>traveling</u> route of the first mobile unit on the basis
of the extracted route information, and searches for the second mobile unit by using
the predicted <u>traveling</u> route.

41. The server device as claimed in claim 34, wherein the search means predicts a
<u>traveling</u> route of the first mobile unit on the basis of the position information
contained in the first request signal, and searches for the second mobile unit by
using the predicted <u>traveling</u> route.

42. The server device as claimed in claim 41, wherein the search means searches for
the second mobile unit on the basis of the information of the <u>traveling</u> route of the
first mobile unit as the position information contained in the first request signal.

47. A data communication method comprising the steps of: when requesting data from
an external device, acquiring position information; and transmitting a first request
signal containing the position information to the external device; and when
providing data to an external device, receiving a second request signal transmitted
from the external device; and returning the data inputted in accordance with the
second request signal to the external device; predicting a <u>traveling</u> route of a
mobile device from the position information, and the information of the <u>traveling</u>
route is contained in the position information; and storing a plurality of route
information on which the mobile device <u>traveled</u> in the past; wherein the route
information which overlaps the position information of the mobile device is
extracted from predicting said <u>traveling</u> route of said mobile device, and then
predicting a <u>traveling</u> route of the mobile device on the basis of the extracted
route information, and updating the position information of the mobile device to the
information of the predicted <u>traveling</u> route.

48. A data communication method comprising the steps of: when requesting data
acquired at another mobile device, acquiring position information; transmitting a
first request signal containing the position information to an external device; and
receiving data transmitted from said another mobile device in accordance with the
first request signal; and when providing data to another mobile device, receiving a
second request signal containing information related to said another mobile device
transmitted from an external device; and returning the data inputted in accordance
with the second request signal to said another mobile device; predicting a <u>traveling</u>
route of the mobile device from the position information, and the information of the
<u>traveling</u> route is contained in the position information; and storing a plurality of
route information on which the mobile device <u>traveled</u> in the past; wherein the route
information which overlaps the position information of the mobile device is

extracted from predicting said traveling route of said mobile device, and then predicting a traveling route of the mobile device on the basis of the extracted route information, and updating the position information of the mobile device to the information of the predicted traveling route.

55. A program storage medium in which a program readably by information processing means is stored, the program comprising: when requesting data from an external device, a step of acquiring position information; a step of transmitting a first request signal containing position information to the external device; and a step of receiving the data transmitted from the external device in accordance with the first request signal; and when providing data to an external device, a step of receiving a second request signal transmitted from the external device; and a step of returning the data inputted in accordance with the second request signal to the external device; predicting a traveling route of a mobile device from the position information, and the information of the traveling route is contained in the position information; and storing a plurality of route information on which the mobile device traveled in the past; wherein the route information which overlaps the position information of the mobile device is extracted from predicting said traveling route of said mobile device, and then predicting a traveling route of the mobile device on the basis of the extracted route information, and updating the position information of the mobile device to the information of the predicted traveling route.

56. A program storage medium in which a program readably by information processing means is stored, the program comprising: when requesting data obtained by another mobile device, a step of acquiring position information; a step of transmitting a first request signal containing position information to an external device; and a step of receiving the data transmitted from said another mobile device in accordance with the first request signal; and when providing data to another mobile device, a step of receiving a second request signal containing information related to another mobile unit transmitted from an external device; and a step of returning data inputted in accordance with the second request signal to said another mobile device; predicting a traveling route of the mobile device from the position information, and the information of the traveling route is contained in the position information; and storing a plurality of route information on which the mobile device traveled in the past; wherein the route information which overlaps the position information of the mobile device is extracted from predicting said traveling route of said mobile device, and then predicting a traveling route of the mobile device on the basis of the extracted route information, and updating the position information of the mobile device to the information of the predicted traveling route.

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☑ 1. Document ID: JP 63202142 A

L3: Entry 1 of 3   File: JPAB   Aug 22, 1988

PUB-NO: JP363202142A
DOCUMENT-IDENTIFIER: JP 63202142 A
TITLE: TRAFFIC INFORMATION NOTICE SYSTEM

PUBN-DATE: August 22, 1988

INVENTOR-INFORMATION:
NAME   COUNTRY
ISHIKAWA, ASAO

ASSIGNEE-INFORMATION:
NAME   COUNTRY
NEC CORP

APPL-NO: JP62034312
APPL-DATE: February 17, 1987

US-CL-CURRENT: 455/228
INT-CL (IPC): H04B 7/26; B60R 16/02; H04L 13/00

ABSTRACT:

PURPOSE: To recognize the newest traffic information by receiving, displaying or
recording traffic information from a radio station for each district.

CONSTITUTION: A radio station 1 receives a notice request of traffic information
from a mobile terminal station 2 or broadcasts and informs the traffic information
of the relevant region for a prescribed period by a signal or a digital radio signal
equal to the signal of a telephone set. The mobile terminal station 2 consists of a
display recorder 3 and a notice device 4 and displays or records it on the recorder
3 in receiving the traffic information. In adopting the same method as the time
information from a general automobile telephone set, the notice request of traffic
information is received individually or the traffic information is received and
displayed individually.

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC |
| Draw Desc | Image |

☐ 2. Document ID: KR 2002068864 A

L3: Entry 2 of 3   File: DWPI   Aug 28, 2002

DERWENT-ACC-NO: 2003-126748
DERWENT-WEEK: 200312
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TITLE: System for providing information through wireless communication and method therefor

INVENTOR: LEE, J Y

PATENT-ASSIGNEE: SYNUS CO LTD (SYNUN)

PRIORITY-DATA: 2001KR-0009224 (February 23, 2001)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
KR 2002068864 A	August 28, 2002		001	H04B007/24

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
KR2002068864A	February 23, 2001	2001KR-0009224	

INT-CL (IPC): H04 B 7/24

ABSTRACTED-PUB-NO: KR2002068864A
BASIC-ABSTRACT:

NOVELTY - A system for providing information through a wireless communication and a method therefor are provided to offer a service with a low price to many users through a mobile communication terminal for transmitting and receiving information according to a TRS(Trunked Radio System) by providing various contents such as civil appeal information, traffic information, an SOS public welfare security service, and a taxi call service through a TRS.

DETAILED DESCRIPTION - A service center(10) receives traffic information from a predetermined traffic information center for providing traffic information according to the request of a user. Mobile terminals(A1-An) provide information provided from the service center(10) to the user according to the request in case that the user requests the provision of information to the service center(10).

ABSTRACTED-PUB-NO: KR2002068864A
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.1/10

DERWENT-CLASS: W02
EPI-CODES: W02-C03D;

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC
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☐ 3. Document ID: KR 2001097355 A

L3: Entry 3 of 3   File: DWPI   Nov 8, 2001

DERWENT-ACC-NO: 2002-223375
DERWENT-WEEK: 200228
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TITLE: System and method for providing traffic information using mobile network

INVENTOR: KIM, H S; KIM, U J ; LEE, E S ; NOH, S Y

PATENT-ASSIGNEE: LG TELECOM LTD (GLDS)

PRIORITY-DATA: 2000KR-0021347 (April 21, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
KR 2001097355 A	November 8, 2001		001	H04Q007/24

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
KR2001097355A	April 21, 2000	2000KR-0021347	

INT-CL (IPC): H04 Q 7/24

ABSTRACTED-PUB-NO: KR2001097355A
BASIC-ABSTRACT:

NOVELTY - A system and a method for providing traffic information using a mobile
network are provided to offer traffic information, based on a mobile terminal
containing a web browser and a wireless Internet access technique using a
WAP(Wireless Application Protocol).

DETAILED DESCRIPTION - A system for providing traffic information using a mobile
network is comprised of a mobile terminal(100), a BS(Base Station)(210), a BSC(Base
Station Controller)(220), an MSC(Mobile Switching Center)(230), an IWF(Inter-Working
Function)(240), a WAP gateway(250), and a mobile network server(260). The BS(210)
executes communication with the mobile terminal(100). The BSC(220) controls the
BS(210). The MSC(230) processes a mobile subscriber's call and extrinsic services.
The mobile network server(260) is connected to an Internet backbone network. The
IWF(240), executing the inter-working function between a PCS network and a data
network, outputs information, based on a traffic information request provided from
the MSC(230), to the WAP gateway(250). The WAP gateway(250) provides the traffic
information provided from the IWF(240) to the mobile network server(260). Based on
this information, the mobile network server(260) connects a traffic information
service server(310-360) and the mobile terminal(100) by wireless.

ABSTRACTED-PUB-NO: KR2001097355A
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.1/10

DERWENT-CLASS: W01 W02
EPI-CODES: W01-B05; W01-B05A1B; W02-C03C3;

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC
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